UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,039	09/27/2005	Masahiro Fujita	09812.0514	4647

22852 7590 07/07/2009

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
901 NEW YORK AVENUE, NW
WASHINGTON, DC 20001-4413

EXAMINER	
SRIRAMAN, NIKHIL	

ART UNIT	PAPER NUMBER
3664	

MAIL DATE	DELIVERY MODE
07/07/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/551,039	FUJITA ET AL.	
	Examiner	Art Unit	
	NIKHIL SRIRAMAN	3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a final Office Action in response to communications filed by Applicant on March 25, 2009. Applicant's claim amendments have been received and entered.

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. To the extent any arguments remain relevant, they are now addressed.

Applicant states on page 19 of the Remarks:

> A rank of robots based on their respective performance data does not teach or suggest "a list of data or programs based on services requested and the information of the robot apparatus" (emphasis added), as recited in claim 25.

Examiner respectfully disagrees. Merriam-Websters defines the term "data": factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation <the *data* is plentiful and easily available — H. A. Gleason, Jr.> <comprehensive *data* on economic growth have been published — N. H. Jacoby>. "data." Merriam-Webster Online Dictionary. 2009. Merriam-Webster Online. 5 July 2009 http://www.merriam-webster.com/dictionary/data.

A rank requires both measurement and calculation. Further, the robot ranking is used as the basis for calculating which robots to retrieve from and supply with information. Thus, it is clear the robot rank constitutes data. Additionally, a rank requires there to be more than one entry, which necessarily results in a list. Therefore, since the rank of robots is a measurement of their fitness, it falls within the first criteria.

As a result "a list of data or programs based on services requested and the information o the robot apparatus" is disclosed by Popp et al.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 25, 27-33, 35-41 and 43-48-rejected under 35 U.S.C. 103(a) as being obvious in view of Popp et al. (6,266,577 B1).

Regarding claims 25, 27 and 29-32, the use of the apparatus for the method claims as disclosed below for claims 33 and 35-40 respectively read on these apparatus claims.

Regarding claim 33, Popp et al. discloses an information providing method for supplying motion data, stating the movements of a plurality of body units of a robot apparatus, or an application program, managing recognition and/or action control, to a robot apparatus, over a network (Fig. 3); the method comprising:

receiving, from the robot apparatus an inquiry comprising a service request and the information of the robot apparatus (Fig. 3, item 310; Col. 4, lines 32 – Col. 5, line 60, where Examiner construes the performance data an inquiry from the robot as to its fitness. Further, because the method's ultimate objective is for each robot to acquire

the fittest controller logic, the service request is construed to constitute a request for the fittest controller logic);

formulating a list of data or program that may be provided to the robot apparatus based on services requested in the service request ad the information of the robot apparatus (Fig. 3, item 320 via determination of most fit constitutes analysis; Col. 4, lines 32 – Col. 5, line 60); and

returning information based on the list to the robot apparatus Fig. 3, item 330; Col. 4, lines 32 – Col. 5, line 60 via "NCC 110 then requests and receives either the signal processing control logic of DSP, the motion control logic of behavior execution unit 252, or both");

receiving a selection of data or programs from the list from the robot apparatus (Id.); and

transmitting the selected data or programs to the robot apparatus (Fig. 3, item 340 via the control logic of the most fit logic is matched to the "less fit" robot and transmitted to the less fit robot; Col. 4, lines 32 – Col. 5, line 60).

Popp et al. (6,266,577 B1) fails to disclose the information the robot apparatus works with only one body unit instead of a plurality or that the information apparatus returns the list itself rather than based on the list.

However, it would have been obvious to one having ordinary skill in the art at the time of invention to modify Popp et al. to only work with one robot body so that even a singular unit could employ genetic algorithms to evolve behavior. It also would have been obvious to one having ordinary skill in the art at the time of invention to modify

Popp et al. to return the list containing robots fitness order instead of communicate based on the robots would know each others fitness when communicating directly with one another.

Regarding claim 35, further comprising supervising supplementary information pertinent to each data or program (Col. 3, lines 6 – Col. 4, line 67 via when NCC evaluates and ranks robots it is supervising and where "threshold value" constitutes supplemental information); and

matching the inquiry and the supplementary information (Col. 4, lines 32-67 via matching occurs between performance data and threshold),

wherein formulating of the list of the data or programs is based on matching of the inquiry and the supplementary information (Col. 4, lines 32-67 via NCC ranking constitutes a list, which is returned when the robot either receives its own controller logic or that of another robot).

Regarding claim 37, wherein the supplementary information comprises information pertinent to services and the information pertinent to information of the robot apparatus (Col. 4, lines 32 – Col. 5, line 60 via threshold value pertains to the fitness of the motion control logic).

Regarding claim 38, wherein the information pertinent of the robot apparatus comprises at least one of the following information: an ID of the robot apparatus, wherein the ID is unique to the robot apparatus; a robot sort ID, wherein the sort ID is unique to a type robot apparatus; a list of functions of the robot apparatus; information indicating hardware architecture of the robot apparatus; and a database list owned by

the robot apparatus (Col. 3, line 60 – Col. 4, line 5 via motion control logic defines a particular motion of robot, and therefore a list of functions).

Regarding claim 39, an information providing method for providing data or a program to a robot apparatus comprising a plurality of robots, over a network (Fig. 3), said method comprising:

receiving, from the robot apparatus, an inquiry comprising a service request and information of the robot apparatus (Fig. 3, item 310; Col. 4, lines 32 – Col. 5, line 60, where Examiner construes the performance data an inquiry from the robot as to its fitness. Further, because the method's ultimate objective is for each robot to acquire the fittest controller logic, the service request is construed to constitute a request for the fittest controller logic);

formulating a list of data or programs that may be provided to the robot apparatus based on services requested in the service request and the information of the robot apparatus (Fig. 3, item 320 via determination of most fit constitutes analysis; Col. 4, lines 32 – Col. 5, line 60); and

returning on the basis of the list to the robot apparatus (Fig. 3, item 330; Col. 4, lines 32 – Col. 5, line 60 via "NCC 110 then requests and receives either the signal processing control logic of DSP, the motion control logic of behavior execution unit 252, or both");

receiving a selection of data or programs from the list from the robot apparatus (Id.);

wherein the information of the robot apparatus comprises a list of functions of the robot apparatus (Col. 4, lines 32 – Col. 5, line 60, where performance data is a list of functions of the robot);

specifying the needed functions for the robot apparatus to render services the services requested (Col. 4, lines 32 – Col. 5, line 60 via fitness constitutes the functional level needed to render a certain quality of service); and

comparing the needed functions to the list of functions to determine the deficit in the robot apparatus, among the needed functions (Col. 4, lines 32 – Col. 5, line 60 via ranking of robots by their fitness);

retrieving one or more objects of functional objects corresponding to the deficit functions, from an object storage means for storing functional objects utilized by the robot apparatus (Fig. 3, item 330; Col. 4, lines 32 – Col. 5, line 60 via "NCC 110 then requests and receives either the signal processing control logic of DSP, the motion control logic of behavior execution unit 252, or both"); and

transmitting the objects and the selected data or programs, to the robot apparatus (Col. 4, lines 32 – Col. 5, line 60 via "NCC then transmits to "less fit" robots 120 the control logic received from the "most fit robots").

Popp et al. (6,266,577 B1) fails to disclose the information the robot apparatus works with only one body unit instead of a plurality or that the information apparatus returns the list itself rather than based on the list.

However, it would have been obvious to one having ordinary skill in the art at the time of invention to modify Popp et al. to only work with one robot body so that even a

singular unit could employ genetic algorithms to evolve behavior. It also would have been obvious to one having ordinary skill in the art at the time of invention to modify Popp et al. to return the list containing robots fitness order instead of communicate based on the robots would know each others fitness when communicating directly with one another.

Regarding claims 41 and 43 and 45-48, the use of the system for the method claims as disclosed above for claims 33 and 35-40 respectively reads these system claims.

4. Claims 34, 26 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popp et al. (6,266,577 B1) in view of Senn (2004/0002790 A1).

Regarding claim 34, Popp et al. discloses remote communication between with robot apparatus (Col. 4, lines 6-32).

Popp et al. fails to disclose wherein communication with the robot apparatus is by SOAP (Simple Object Access Control).

However, Senn discloses software in the field of robotics communications ([0042]) wherein information is distributed through SOAP ([0043]).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to combine robotic wireless communication system as disclosed by Popp et al. with the use of information transmission through SOAP as disclosed by Senn in order to provide a more flexible communication means (Senn, [0043]).

Regarding claims 26 and 42, the use of the system for the method claims as disclosed above for claim 34 respectively reads these system claims.

5. Claims 36, 28 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Popp et al. (6,266,577 B1) in view of Komuro (6,165,678).

Regarding claim 36, Popp et al. fails to disclose, but Kumoru does disclose is known in the art is returning, in response to the selection from a list, an access method for accessing the selected data or programs to the robot apparatus, wherein transmitting the selected data comprises transmitting the data or the program in response to an access request complying with the access method from the robot apparatus (Col. 7, lines 1-50).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to modify the method as disclosed by Popp to employ the step of providing an access method resulting in data transmission as disclosed by Komuro in order to allow access to information in a distributed computing system (Komuro, Col. 6, lines 45-55).

Regarding claim 28 and 44, the use of the system for the method claim as disclosed above for claim 36 reads these system claims.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIKHIL SRIRAMAN whose telephone number is (571)270-5797. The examiner can normally be reached on Monday through Friday, 7:30am-5:00pm, with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NIKHIL SRIRAMAN
Examiner
Art Unit 3664

N.S.
/KHOI TRAN/
Supervisory Patent Examiner, Art Unit 3664